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| 09/912,315 | 07/26/2001 | Hideo Kobayashi | 110207 | 4956 |

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| EXAMINER | |
|---|---|
| NGUYEN, KEVIN M | |

| ART UNIT | PAPER NUMBER |
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| 2674 | 8 |

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/912,315 | KOBAYASHI ET AL. | |
| | Examiner | Art Unit | |
| | Kevin M. Nguyen | 2674 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *03 December 2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-18* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-18* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

The remarks filed on 12/03/2003 have been fully considered but they are not persuasive. New claims 16-18 are entered. However, the rejections of claims 1-18 are maintained.

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 1-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim above, it is not clear what the Applicant means

"a direction of an applied voltage" recited in lines 3-4 of claims 1, 3, 4,

"a direction of an applied voltage" recited in lines 2-3 of claim 2,

"a direction of an applied voltage" recited in lines 11-12 of claim 3,

"a direction of an applied voltage" recited in line 9 of claim 4,

"a direction of an applied voltage" recited in line 4 of claim 12,

"a direction of an applied voltage" recited in lines 4-5 of claim 14,

"the applied voltage direction" recited in line 7 of claim 1.

Voltage is a scalar and therefore has no spatial direction. Voltage is synonymous with potential difference only in an electrostatic field. The unclear language "**voltage direction**" and "a **direction** of an applied voltage" are indefinite and require to change **voltage polarity** and a **polarity** of an applied voltage.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-7, 12 are rejected under 35 U.S.C. 102(e) as being anticipated by Oba et al (US 6,441,828).

2. As to claim 1, Oba et al teaches an image display apparatus (50) associated with a method, the apparatus comprising:

a display element (a liquid crystal display device 52, fig. 15), an optical switching element (a power switch 68, a recognition sensor 56, and a light sensor 55, fig. 15) comprising a ratio of the resistance component (a variable resistor 69, fig. 15), and applying the applied voltage (an AC power supply 67, fig. 15).

3. As to claim 2, Oba et al teaches

[recited in lines 3 of claim 2]

the display brightness controller 69, comprising a variable resistor that changes the amount of the voltage being across the resistor depending on the light detection output from the light sensor 55 (fig. 15, col. 10, line 66 through col. 11, line 2).

4. As to claims 3 and 4, Oba et al teaches an image display apparatus (50) associated with a method, the apparatus comprising:

[recited in lines 5-14 of claims 3 and 4]

the display brightness controller 69, comprising a variable resistor that changes the amount of the voltage depending on the light detection output from the light sensor 55 so that the display on **the display panel 52 is turned ON or OFF** depending upon the **light** detection output from **the light sensor 55**. That is, when the light sensor 55 selects an amount of the **light** around **the image display apparatus 50**, which is **larger or smaller than predetermined** (a threshold voltage) (fig. 15, col. 10, line 66 through col. 11, line 5).

As to claims 5, 7, Oba et al teaches a phase changed of the display element (52) is controlled by a threshold voltage "predetermined range" after a driving pulse is turned off (see column 10, lines 55-58).

As to claim 6, Oba et al teaches a first threshold voltage "predetermined range" of a sensor 56, and a second threshold voltage "predetermined value" of the sensor 55 (see figure 15).

As to claim 12, Oba et al teaches the optical switching elements (55, 56), a resistance component (69), an AC voltage, and a display element (52).

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 8-10 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oba et al in view of Iijima et al (US 5,516,607).

As to claims 8-10, 13, Oba et al teaches all of the claimed limitation of claim 1, except for a cholesteric liquid crystal, an organic material, a charge generating layer, a charge transport layer. However, Iijima et al teaches a cholesteric liquid crystal (column 6, lines 57-58), an organic material (column 7, line 53), a charge generating layer, a charge transport layer (column 13, lines 41-45). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the a cholesteric liquid crystal, an organic material, a charge generating layer, a charge transport layer taught by Iijima et al for Oba et al's display panel because this would improve the high resolution images (column 3, lines 12-13), while fabricating the display panel at simple as well (column 3, lines 20-22 of Iijima et al).

6. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Oba et al in view of Shimizu (US 3,700,936).

As to claim 11, Oba et al teaches all of the claimed limitation of claim 1, except for the applied voltage is a sine wave whose frequency is equal to or higher than 500Hz. However, Shimizu teaches the applied voltage is a sine wave whose frequency is equal to or higher than 500Hz (see figures 1 and 2, column 2, lines 49-51). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the applied voltage is a sine wave whose frequency is equal to or higher than 500Hz taught by Shimizu for Oba et al's transformer because this would improve the frequency of the driving voltage supplied to the elements (column 1, lines 28-29 of Shimizu).

7. Claims 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Oba et al in view of Shakamoto (US 6,429,839).

As to claims 14 and 15, Oba et al teaches all of the claimed limitation of claim 1, except for a recording medium driving unit, a photo-addressing unit. However, Shakamoto teaches a related LCD panel which includes a LCD driving unit (3) and a back light (2) (see figure 1, column 6, lines 21-29). It would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the LCD driving unit (3) and the back light (2) for Oba et al's LCD panel because the light for the display is consistently maintained in a suitable state while flicker in the display is reduced (see column 5, lines 1-3 of Sakamoto).

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. Claim 16 is rejected under 35 U.S.C. 102(b) as being anticipated by Kohashi (newly cited, US 3,5,75,634).

As to claim 16, Kohashi teaches an apparatus associated with a method, the apparatus comprising:

a display element 100 (fig. 1), an optical switching element (200, 300) comprising a capacitor $C_B$, a variable resistor Rp, fig. 1) comprising a ratio of the resistance component (a variable resistor Rp, fig. 1), the applied voltage **polarity** (an AC power

supply $V_A$ and variable voltage $V_B$, fig. 1, col. 6, lines 1-7), and an electrical charge amount of the display element (a charge of a capacitor $C_E$ of the display 100, fig. 1).

10. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohashi (newly cited, US 3,5,75,634).

As to claims 17 and 18, Kohashi teaches an apparatus associated with a method, the apparatus comprising:

a display element 100 (fig. 1), an optical switching element (200, 300) comprising a capacitor $C_B$, a variable resistor Rp, fig. 1) comprising a ratio of the resistance component (a variable resistor Rp, fig. 1), the applied voltage **polarity** (an AC power supply $V_A$ and variable voltage $V_B$, fig. 1, col. 6, lines 1-7), and an electrical charge amount of the display element (a charge of a capacitor $C_E$ of the display 100, fig. 1).

Accordingly, Kohashi teaches all of the claimed limitations except that the voltage applied to the display element is greater than and smaller than a threshold voltage of the display element to turns on and off depending on the light detection output from the light sensor.

However, Oba teaches the display brightness controller 69, comprising a variable resistor that changes the amount of the voltage depending on the light detection output from the light sensor 55 so that the display on the display panel 52 is turned ON or OFF depending upon the light detection output from the light sensor 55. That is, when the light sensor 55 selects an amount of light around the image display apparatus 50, which is larger or smaller than predetermined (a threshold voltage) (fig. 15, col. 10, line 66 through col. 11, line 5).

Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention to modify Kohashi's display element including turn on and off, in view of the teaching in the Oba reference because this would provide the power consumed by the image display apparatus can be saved. An energy saving is attained (col. 10, lines 60-62 of Oba).

***Response to Arguments***

11. Applicant's arguments filed 12/03/2003 have been fully considered but they are not persuasive.

12. In response to applicant's argument that claim 1 recites "controlling a ratio of the resistance component of the optical switching element at least depending on the applied voltage." This argument is not persuasive because Oba's invention teaches the display brightness controller 69, comprising **the variable resistor 69** is controlled or changed the amount of a **voltage** (emphasis) between two conductors of the circuit depend on the light detection output from the **light** sensor 55. Again, this is seen to meet the claimed limitations, as best understand in view of the 35 U.S.C. 112 rejection made above.

13. Applicant states that recited "figure 1 of the present application disclose an optical switching element connected to **a signal generating element**. The **polarity** of the **signal** generated by **the signal generating element** can be **reversed**," page 7, lines 16-18.

In response Examiner disagrees because the specification only discloses "as shown in fig. 1, it is characterized in that in **the case of radiating light** (emphasis), the

resistance component is varied between the case where **an electric current flow** (emphasis) from the optical switching element side to the display element said and the case where the electric current flows from the display element to the optical switching element. Concerning **applying voltage** (emphasis), in the following description, the case of flowing from the optical switching element side to the display element side is taken as the **positive polarity** (emphasis), and the case of flowing from the display element to the optical switching element is taken as the **negative polarity** (emphasis) for convenience," at page 7, line 20 through page 8, line 3.

Accordingly, there is nowhere in the specification that discloses "figure 1 of the present application disclose an optical switching element connected to **a signal generating element** (emphasis). The polarity of the **signal** generated by **the signal generating element** can be reversed," at page 7, lines 16-18.

There argument are not persuasive because based on the definition of the specification, the optical switching element is used as a switching element and the resistance component ratio is controlled by **light** (different the **signal)**, at page 7, lines 16-18, thereby controlling the on-off operation of a display, at page 7, lines 13-14.

14. Applicant states that recited "no voltage signal generating device is disclosed in this passage, which could change the **direction (?)** of the applied voltage to the variable resistor of brightness controller 69," at page 7, lines 21-23. In response, Examiner disagrees because the variable resistor 69 is controlled or changed the amount of a **voltage** (emphasis) between two conductor of the circuit depend on the

light detection output from the **light** sensor 55. Again, this is seen to meet the claimed limitations, as best understand in view of the 35 U.S.C. 112 rejection made above.

15. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **the applied voltage polarity**) are not recited in the rejected claims 1-15. Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

For these reasons, the rejections based on Oba have been maintained.

***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

17. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Kevin M. Nguyen** whose telephone number is **703-305-6209**. The examiner can normally be reached on MON-THU from 9:00-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard A Hjerpe** can be reached on **703-305-4709**.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered response should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

Kevin M. Nguyen
Patent Examiner
Art Unit 2674

KN
February 16, 2004

XIAO WU
PRIMARY EXAMINER